

CLAIMS

1. A distortion compensation apparatus comprising:
a power calculation section that measures baseband
5 signal power at predetermined time intervals;
a compensation computation section that generates
a compensation signal for suppressing distortion
components of said baseband signal so that a first phase
component and a first amplitude component when power is
10 identical in said compensation signal differ when current
power measured by said power calculation section is rising
with respect to past power and when current power measured
by said power calculation section is falling with respect
to past power;
15 a compensation signal combining section that
combines said compensation signal generated by said
compensation computation section with said baseband
signal; and
an amplification section that suppresses with said
20 compensation signal said distortion components generated
during amplification by amplifying said baseband signal
with which said compensation signal is combined by said
compensation signal combining section.
- 25 2. The distortion compensation apparatus
according to claim 1, wherein said compensation
computation section detects said distortion components
that are nonlinear and for which a second amplitude

component and a second phase component when power is identical in said distortion components differ when current power measured by said power calculation section is rising with respect to past power and when current power measured by said power calculation section is falling with respect to past power, and generates said compensation signal that has said first amplitude component and said first phase component that are symmetrical to said second amplitude component and said second phase component in detected said distortion components with respect to a fixed value of said second amplitude component and said second phase component when said distortion components have a linear characteristic.

3. A transmitting apparatus provided with a distortion compensation apparatus, said distortion compensation apparatus comprising:

a power calculation section that measures baseband signal power at predetermined time intervals;

a compensation computation section that generates a compensation signal for suppressing distortion components of said baseband signal so that a first phase component and a first amplitude component when power is identical in said compensation signal differ when current power measured by said power calculation section is rising with respect to past power and when current power measured by said power calculation section is falling with respect to past power;

a compensation signal combining section that combines said compensation signal generated by said compensation computation section with said baseband signal; and

5 an amplification section that suppresses with said compensation signal said distortion components generated during amplification by amplifying said baseband signal with which said compensation signal is combined by said compensation signal combining section.

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4. A distortion compensation method comprising:

 a step of measuring baseband signal power at predetermined time intervals;

 a step of generating a compensation signal for
15 suppressing distortion components of said baseband signal so that a first phase component and a first amplitude component when power is identical in said compensation signal differ when measured current power is rising with respect to past measured power and when measured current
20 power is falling with respect to past measured power;

 a step of combining generated said compensation signal with said baseband signal; and

 a step of suppressing with said compensation signal said distortion components generated during
25 amplification by amplifying said baseband signal with which said compensation signal is combined.